

Claim 1 (Formula 1)

Krishnan 10/004,481

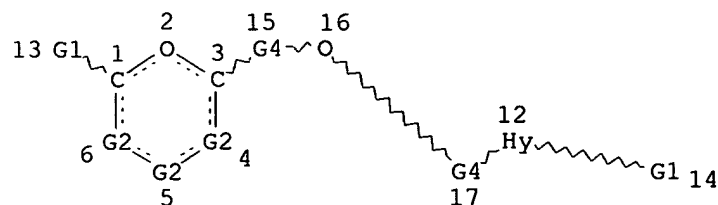
Zero hits

May 27, 2003

=> d que

L18

STR



CH2-NH-G3
@18 19 20

Ak @43

27
G3
CH2-N-G3
@21 22 23

CH2-O-G3
@24 25 26

CH-NH-G3
@28 29 30

41
G3
CH-N-G3
@31 32 33

Cb @44

42
O
CH-O-C-G3
@34 35 36 37

CH-O-G3
@38 39 40

VAR G1=CH3/18/21/24

VAR G2=CH2/28/31/34/38

VAR G3=43/44

REP G4=(0-1) CH2

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 43

CONNECT IS E1 RC AT 44

DEFAULT MLEVEL IS ATOM

GGCAT IS MCY SAT AT 12

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS X5 C E1 O AT 12

ECOUNT IS X8 C AT 43

ECOUNT IS X8 C AT 44

GRAPH ATTRIBUTES:

RSPEC 3

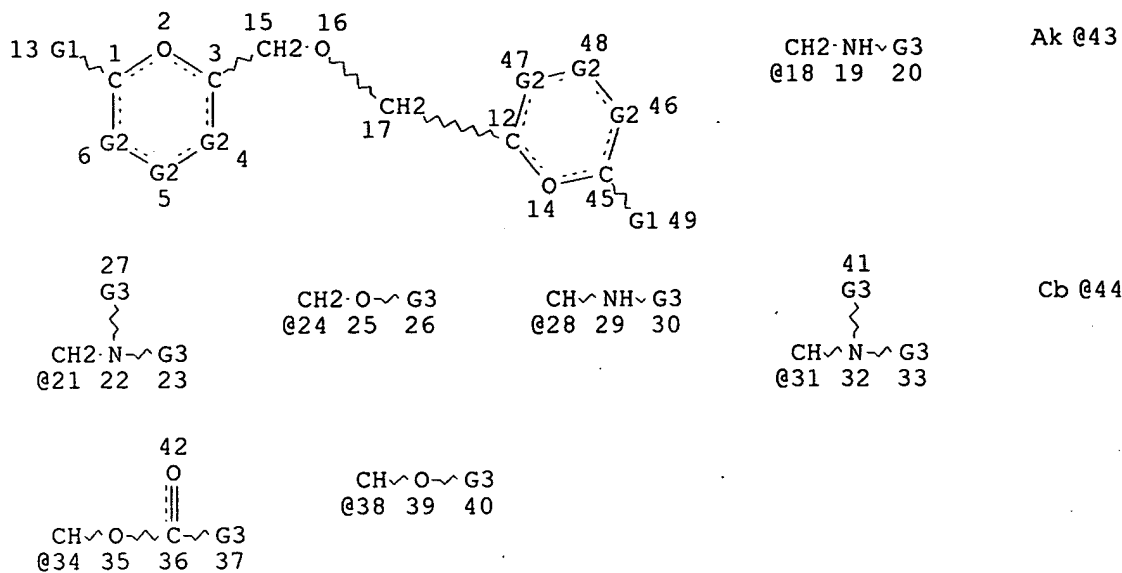
NUMBER OF NODES IS 39

STEREO ATTRIBUTES: NONE

L20 123268 SEA FILE=REGISTRY ABB=ON PLU=ON 2 OC5/ES OR (OC4/ES AND OC5/ES)

L22 1680 SEA FILE=REGISTRY SUB=L20 SSS FUL L18

L23 STR



VAR G1=CH3/18/21/24

VAR G2=CH2/28/31/34/38

VAR G3=43/44

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 43

CONNECT IS E1 RC AT 44

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS X8 C AT 43

ECOUNT IS X8 C AT 44

GRAPH ATTRIBUTES:

RSPEC 3

NUMBER OF NODES IS 44

STEREO ATTRIBUTES: NONE

L24 0 SEA FILE=REGISTRY SUB=L22 SSS FUL L23

Claim 1 (Formula 2)

Krishnan 10/004,481

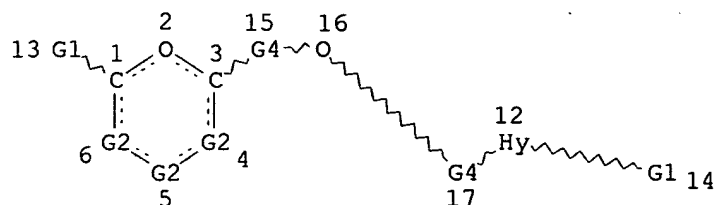
zero hits

May 27, 2003

=> d que

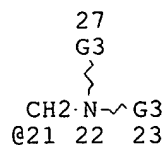
L18

STR



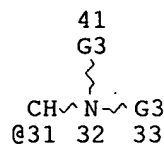
CH2-NH-G3
@18 19 20

Ak @43

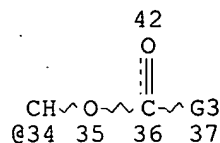


CH2-O-G3
@24 25 26

CH-NH-G3
@28 29 30



Cb @44

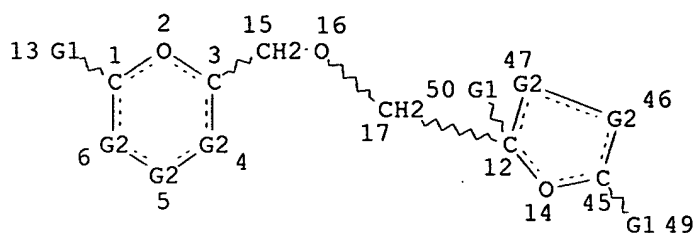


CH-O-G3
@38 39 40

VAR G1=CH3/18/21/24
VAR G2=CH2/28/31/34/38
VAR G3=43/44
REP G4=(0-1) CH2
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 43
CONNECT IS E1 RC AT 44
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY SAT AT 12
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS X5 C E1 O AT 12
ECOUNT IS X8 C AT 43
ECOUNT IS X8 C AT 44

GRAPH ATTRIBUTES:
RSPEC 3
NUMBER OF NODES IS 39

STEREO ATTRIBUTES: NONE
L20 123268 SEA FILE=REGISTRY ABB=ON PLU=ON 2 OC5/ES OR (OC4/ES AND
OC5/ES)
L22 1680 SEA FILE=REGISTRY SUB=L20 SSS FUL L18
L25 STR



CH2-NH~G3
@18 19 20

Ak @43

27
G3
CH2-N~G3
@21 22 23

CH2-O~G3
@24 25 26

CH~NH~G3
@28 29 30

41
G3
CH~N~G3
@31 32 33

Cb @44

42
O
CH~O~C~G3
@34 35 36 37

CH~O~G3
@38 39 40

VAR G1=CH3/18/21/24

VAR G2=CH2/28/31/34/38

VAR G3=43/44

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 43

CONNECT IS E1 RC AT 44

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS X8 C AT 43

ECOUNT IS X8 C AT 44

GRAPH ATTRIBUTES:

RSPEC 46 3

NUMBER OF NODES IS 44

STEREO ATTRIBUTES: NONE

L27 0 SEA FILE=REGISTRY SUB=L22 SSS FUL L25

Claim 1 (Formula 3+4) + text (claim 9-20)

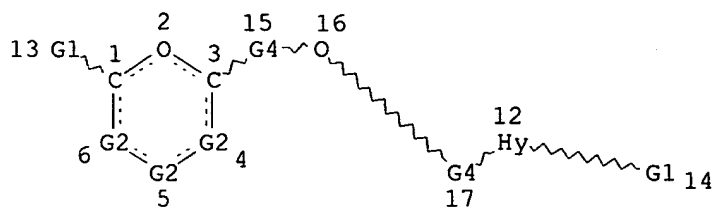
Krishnan 10/004,481

May 27, 2003

=> d que

L18

STR



CH₂-NH-G3
@18 19 20

Ak @43

27
G3
CH₂-N-G3
@21 22 23

CH₂-O-G3
@24 25 26

CH-NH-G3
@28 29 30

41
G3
CH-N-G3
@31 32 33

Cb @44

42
O
CH-O-C-G3
@34 35 36 37

CH-O-G3
@38 39 40

VAR G1=CH3/18/21/24

VAR G2=CH2/28/31/34/38

VAR G3=43/44

REP G4=(0-1) CH2

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 43

CONNECT IS E1 RC AT 44

DEFAULT MLEVEL IS ATOM

GGCAT IS MCY SAT AT 12

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS X5 C E1 O AT 12

ECOUNT IS X8 C AT 43

ECOUNT IS X8 C AT 44

GRAPH ATTRIBUTES:

RSPEC 3

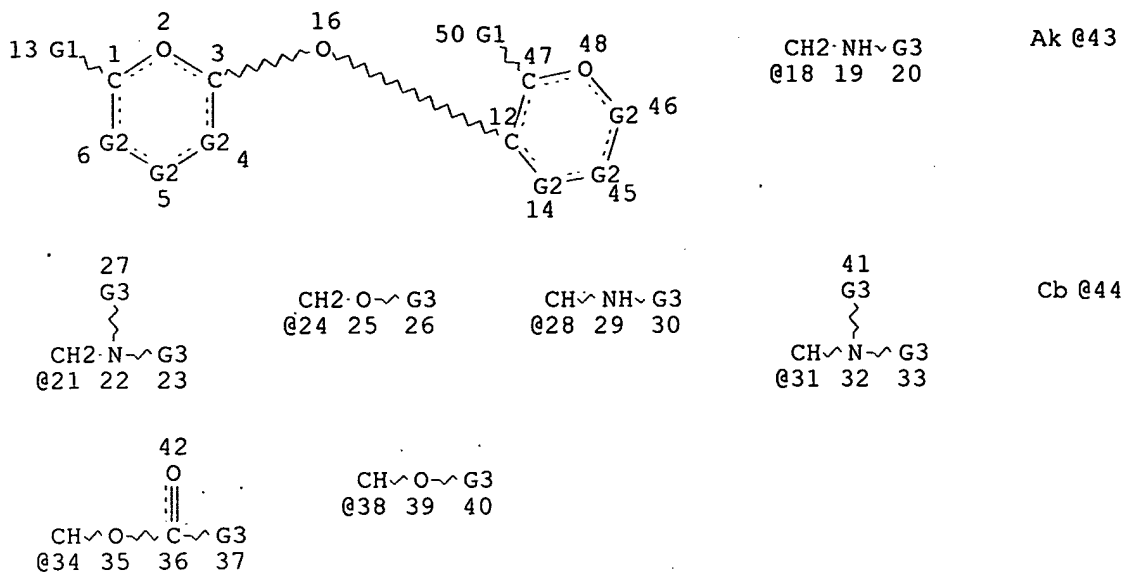
NUMBER OF NODES IS 39

STEREO ATTRIBUTES: NONE

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L22 1680 SEA FILE=REGISTRY SUB=L20 SSS FUL L18

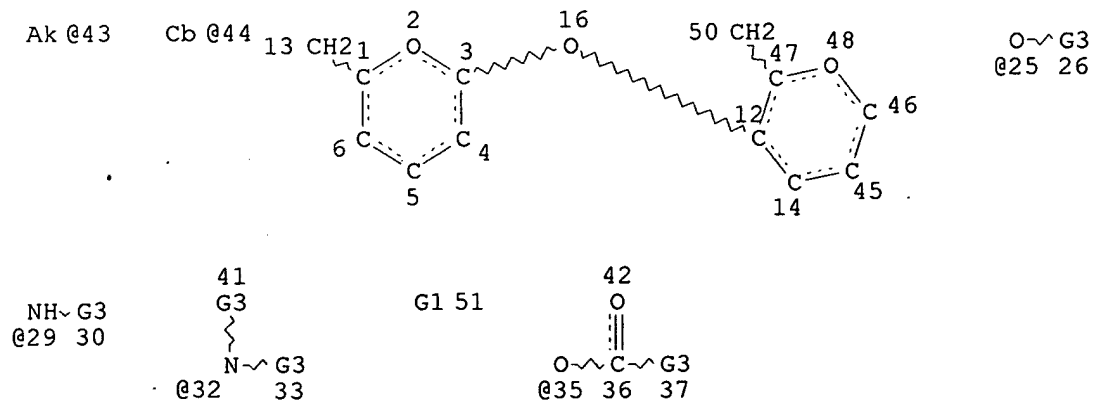
L28 STR



VAR G1=CH3/18/21/24
 VAR G2=CH2/28/31/34/38
 VAR G3=43/44
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 CONNECT IS E1 RC AT 43
 CONNECT IS E1 RC AT 44
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED
 ECOUNT IS X8 C AT 43
 ECOUNT IS X8 C AT 44

GRAPH ATTRIBUTES:
 RSPEC 3
 NUMBER OF NODES IS 42

STEREO ATTRIBUTES: NONE
 L29 100 SEA FILE=REGISTRY SUB=L22 SSS FUL L28
 L33 STR



VAR G1=25/29/32/35

VAR G3=43/44

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 43
CONNECT IS E1 RC AT 44
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS X8 C AT 43
ECOUNT IS X8 C AT 44

GRAPH ATTRIBUTES:

RSPEC 3
NUMBER OF NODES IS 29

STEREO ATTRIBUTES: NONE

L34 98 SEA FILE=REGISTRY SUB=L29 SSS FUL L33
L35 93 SEA FILE=HCAPLUS ABB=ON PLU=ON L34
L41 12 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 AND (LIPID OR PROTEIN OR
PEPTIDE OR HORMONE OR SACCHARIDE OR NUCLEIC ACID OR GROWTH
FACTOR OR INSULIN OR MONOCLON? OR INTERFERON OR INTERLEUKIN OR
CYTOKINE OR IMMUNOGENIC)
L42 153224 SEA FILE=HCAPLUS ABB=ON PLU=ON DRUG DELIVERY SYSTEMS+OLD,NT/C
T
L43 0 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 AND L42
L44 12 SEA FILE=HCAPLUS ABB=ON PLU=ON L41 OR L43

=> d ibib abs hitind hitstr l44 1-12

L44 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:623059 HCAPLUS

DOCUMENT NUMBER: 129:302773

TITLE: Synthesis and NMR analysis of ¹³C-labeled
oligosaccharides corresponding to the major glycolipid
from Mycobacterium leprae

AUTHOR(S): Wu, Ximao; Marino-Albernas, Jose-R.; Auzanneau,
France-Isabelle; Verez-Bencomo, Vicente; Pinto, B.
Mario

CORPORATE SOURCE: Department of Chemistry, Simon Fraser University,
Burnaby, BC, V5A 1S6, Can.

SOURCE: Carbohydrate Research (1998), 306(4), 493-503

CODEN: CRBRAT; ISSN: 0008-6215

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB An improved synthesis of Pr 4-O-(3,6-di-O-methyl-.beta.-D-glucopyranosyl)-
2,3-di-O-methyl-.alpha.-L-rhamnopyranoside, a disaccharide corresponding
to the phenolic glycolipid of Mycobacterium leprae using a
trichloroacetimidate as a glycosyl donor is described. The synthetic
strategy is also applied to the prepn. of three corresponding disaccharide
analogs contg. ¹³C-labeled Me groups. The prepn. of the trisaccharide, Pr
2-O-[4-O-(3,6-di-O-methyl-.beta.-D-glucopyranosyl)-2,3-di-O-methyl-.alpha.-
L-rhamnopyranosyl]-3-O-methyl-.alpha.-L-rhamnopyranoside is also reported.
The di- and tri-saccharides were characterized by ¹H and ¹³C NMR
spectroscopy.

CC 33-4 (Carbohydrates)

IT 39687-52-0P 89821-78-3P 102717-49-7P 121423-37-8P 214402-93-4P
214402-94-5P 214402-95-6P 214402-96-7P 214402-97-8P 214402-98-9P

214402-99-0P 214403-00-6P 214403-01-7P 214403-02-8P
 214403-03-9P 214403-04-0P 214403-05-1P
 214403-06-2P 214403-10-8P 214403-11-9P 214403-12-0P
 214403-13-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and NMR anal. of ^{13}C -labeled oligosaccharides corresponding to the major glycolipid from *Mycobacterium leprae*)

IT 214403-03-9P 214403-04-0P 214403-05-1P

214403-06-2P

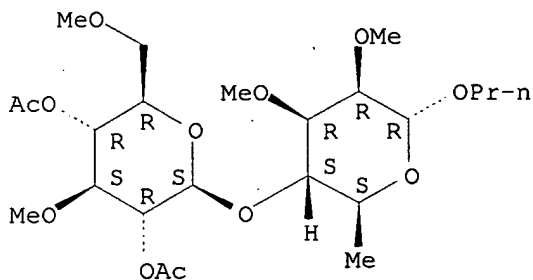
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and NMR anal. of ^{13}C -labeled oligosaccharides corresponding to the major glycolipid from *Mycobacterium leprae*)

RN 214403-03-9 HCAPLUS

CN .alpha.-L-Mannopyranoside, propyl 6-deoxy-4-O-(2,4-di-O-acetyl-3,6-di-O-methyl-.beta.-D-glucopyranosyl)-2,3-di-O-methyl- (9CI) (CA INDEX NAME)

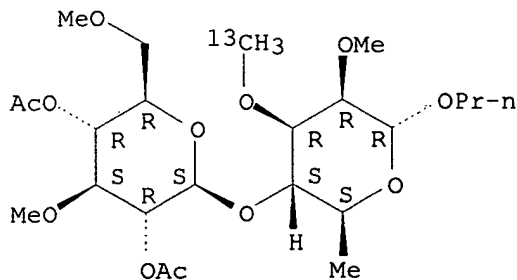
Absolute stereochemistry. Rotation (-).



RN 214403-04-0 HCAPLUS

CN .alpha.-L-Mannopyranoside, propyl 6-deoxy-4-O-(2,4-di-O-acetyl-3,6-di-O-methyl-.beta.-D-glucopyranosyl)-2-O-methyl-3-O-(methyl- ^{13}C)- (9CI) (CA INDEX NAME)

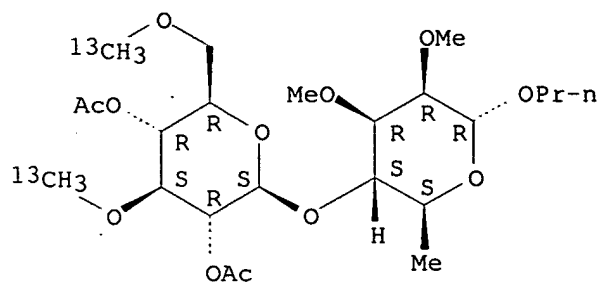
Absolute stereochemistry.



RN 214403-05-1 HCAPLUS

CN .alpha.-L-Mannopyranoside, propyl 6-deoxy-4-O-[2,4-di-O-acetyl-3,6-di-O-(methyl- ^{13}C)-.beta.-D-glucopyranosyl]-2,3-di-O-methyl- (9CI) (CA INDEX NAME)

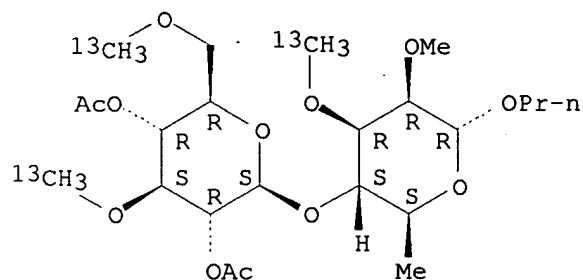
Absolute stereochemistry. Rotation (-).



RN 214403-06-2 HCAPLUS

CN .alpha.-L-Mannopyranoside, propyl 6-deoxy-4-O-[2,4-di-O-acetyl-3,6-di-O-(methyl-13C)-.beta.-D-glucopyranosyl]-2-O-methyl-3-O-(methyl-13C)- (9CI)
(CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1992:449045 HCAPLUS

DOCUMENT NUMBER: 117:49045

TITLE: Thermal degradation of glycosides. VI.
Hydrothermolysis of cardenolide and flavonoid glycosides

AUTHOR(S): Kim, Youn Chul; Higuchi, Ryuichi; Komori, Tetsuya
CORPORATE SOURCE: Fac. Pharm. Sci., Kyushu Univ., Fukuoka, 812, Japan
SOURCE: Liebigs Annalen der Chemie (1992), (6), 575-9
CODEN: LACHDL; ISSN: 0170-2041

DOCUMENT TYPE: Journal

LANGUAGE: English

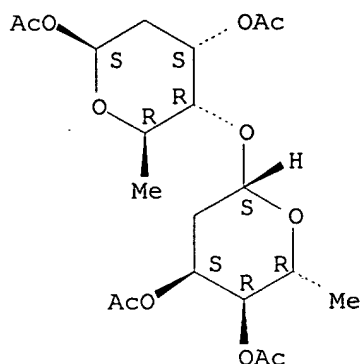
AB On heating with water or aq. dioxane, cardenolide and flavonoid glycosides are converted into their aglycons and partially hydrolyzed products, together with **saccharide** moieties. The glycosidic linkage of 2-deoxy sugar moieties in cardenolide glycosides is more readily cleaved by thermal hydrolysis than that of the common sugar moieties. Therefore on thermal hydrolysis, odoroside K, a uzarigenin triglycoside bearing a 2-deoxy sugar moiety directly attached to the aglycon, is selectively cleaved at the sugar-aglycon linkage.

CC 33-3 (Carbohydrates)

IT 16479-50-8P 18404-43-8P 67335-77-7P 139759-40-3P

139759-41-4P
 RL: FORM (Formation, nonpreparative); PREP (Preparation)
 (formation of, in thermal hydrolysis of digitoxin)
 IT 139759-40-3P
 RL: FORM (Formation, nonpreparative); PREP (Preparation)
 (formation of, in thermal hydrolysis of digitoxin)
 RN 139759-40-3 HCAPLUS
 CN .beta.-D-ribo-Hexopyranose, 2,6-dideoxy-4-O-(3,4-di-O-acetyl-2,6-dideoxy-
 .beta.-D-ribo-hexopyranosyl)-, diacetate (9CI) (CA INDEX NAME)

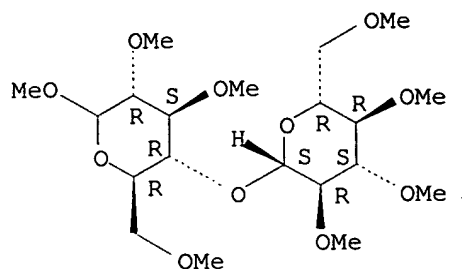
Absolute stereochemistry.



L44 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1986:564192 HCAPLUS
 DOCUMENT NUMBER: 105:164192
 TITLE: Combined liquid chromatography-mass spectrometry for
 microscale structural studies of carbohydrates
 AUTHOR(S): Hsu, Fong Fu; Edmonds, Charles G.; McCloskey, James A.
 CORPORATE SOURCE: Dep. Med. Chem., Univ. Utah, Salt Lake City, UT,
 84112, USA
 SOURCE: Analytical Letters (1986), 19(11-12), 1259-71
 CODEN: ANALBP; ISSN: 0003-2719
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Combined HPLC-thermospray mass spectrometry of mono- and disaccharides,
 1-O-methylglycosides, and O-permethyl mono- through tetrasaccharides was
 studied to assess the potential role of thermospray ionization for
 microscale structural studies of **saccharides** and
 glycoconjugates, and for high-sensitivity detection of liq. chromatog.
 effluents. Using NH₄CO₂H as eluent for reversed-phase HPLC, abundant
 MNH₄⁺ ions are formed from monosaccharides and mono- and permethylated
saccharides, and are suitable for monitoring sub-nanogram
 constituents in HPLC effluents. Detection of 100 pg (0.5 pmol) of
 1-O-methylhexopyranosides with signal/noise >10 is demonstrated.
 CC 80-4 (Organic Analytical Chemistry)
 Section cross-reference(s): 33
 IT 69-79-4 97-30-3 99-20-7 499-40-1 528-50-7 534-46-3 554-91-6
 617-04-9 **1633-36-9** 1724-14-7 2140-29-6 **2874-27-3**
 3396-99-4 4117-96-8 5346-73-6 14168-89-9 25018-29-5 32581-46-7
 34980-39-7 38948-17-3 56247-29-1 104514-05-8 104514-06-9
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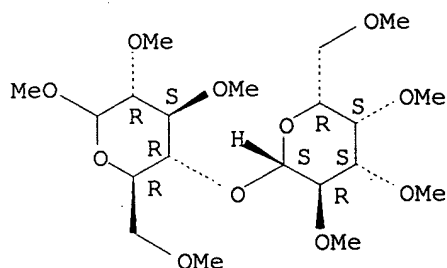
RL: PRP (Properties); ANST (Analytical study)
 (HPLC-mass spectrometry of, with thermospray ionization)
 IT 1633-36-9 2874-27-3 104537-77-1
 RL: PRP (Properties); ANST (Analytical study)
 (HPLC-mass spectrometry of, with thermospray ionization)
 RN 1633-36-9 HCAPLUS
 CN D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-
 .beta.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 2874-27-3 HCAPLUS
 CN D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-
 .beta.-D-galactopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 104537-77-1 HCAPLUS

L44 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1984:137058 HCAPLUS

DOCUMENT NUMBER: 100:137058

TITLE: Chemical synthesis and serology of disaccharides and trisaccharides of phenolic glycolipid antigens from the leprosy bacillus and preparation of a disaccharide **protein** conjugate for serodiagnosis of leprosy

AUTHOR(S): Fujiwara, Tsuyoshi; Hunter, Shirley W.; Cho, Sang Nae; Aspinall, Gerald O.; Brennan, Patrick J.

CORPORATE SOURCE: Dep. Chem., York Univ., Downsview, ON, M3J 1P3, Can.

SOURCE: Infection and Immunity (1984), 43(1), 245-52

CODEN: INFIBR; ISSN: 0019-9567

DOCUMENT TYPE: Journal

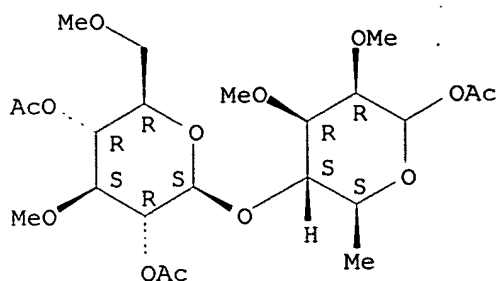
LANGUAGE: English

AB The structural requirements within the species-specific 3,6-di-O-methyl-.beta.-D-glucopyranosyl-(1.fwdarw.4)-2,3-di-O-methyl-

.alpha.-L-rhamnopyranosyl-(1.fwdarw.2)-3-O-methyl-.alpha.-L-rhamnopyranose unit of the phenolic glycolipid I antigen of Mycobacterium leprae for binding to anti-glycolipid IgM from human leprosy sera were examd. Chem. defined, partially deglycosylated fragments of phenolic glycolipid I, 2 other minor M. leprae-specific phenolic glycolipids (those contg. 6-O-methyl-.beta.-D-glucopyranosyl-(1.fwdarw.4)-2,3-di-O-methyl-.alpha.-L-rhamnopyranosyl-(1.fwdarw.2)-3-O-methyl-.alpha.-L-rhamnopyranose and 3,6-di-O-methyl-.beta.-D-glucopyranosyl-(1.fwdarw.4)-3-O-methyl-.alpha.-L-rhamnopyranosyl-(1.fwdarw.2)-3-O-methyl-.alpha.-L-rhamnopyranose units), and phenolic glycolipids from other mycobacteria were used. Addnl., the trisaccharide of phenolic glycolipid I, the 3,6-di-O-methyl-.beta.-D-glucopyranosyl-(1.fwdarw.4)-2,3-di-O-methyl-.alpha.-L-rhamnopyranose, the 6-O-methyl-.beta.-D-glucopyranosyl-(1.fwdarw.4)-2,3-di-O-methyl-.alpha.-L-rhamnopyranose, and the .beta.-D-glucopyranosyl-(1.fwdarw.4)-2,3-di-O-methyl-.alpha.-L-rhamnopyranose disaccharides were synthesized and characterized, and their activities were examd. Only the phenolic glycolipids contg. 3,6-di-O-methyl-.beta.-D-glucopyranosyl at the nonreducing terminus were efficient in binding the anti-glycolipid IgM, and the 3,6-di-O-methyl-.beta.-D-glucopyranosyl-contg. di- and trisaccharides were the most effective in inhibiting this binding. Thus, the 3,6-di-O-methyl-.beta.-D-glucopyranosyl substituent was recognized as the primary antigen determinant in phenolic glycolipid I. With this information, bovine serum albumin contg. reductively aminated 3,6-di-O-methyl-.beta.-D-glucopyranosyl-(1.fwdarw.4)-2,3-di-O-methyl-L-rhamnose was prepd. and shown to be highly active in the serodiagnosis of leprosy.

CC 15-2 (Immunochemistry)
 ST **saccharide** prepn glycolipid antigen Mycobacterium leprae;
 leprosy diagnosis **saccharide** glycolipid
 IT Antigens
 RL: BIOL (Biological study)
 (determinants, **saccharides** of phenolic glycolipids of
 Mycobacterium leprae as)
 IT Mycobacterium leprae
 (**saccharides** of phenolic glycolipids of, prepn. of, as
 antigenic determinants)
 IT Glycolipids
 RL: PREP (Preparation)
 (**saccharides** of phenolic, of Mycobacterium leprae, prepn. of,
 as antigenic determinants)
 IT Molecular structure-biological activity relationship
 (antibody-binding, of **saccharides** of phenolic glycolipids of
 Mycobacterium leprae)
 IT **89316-02-9P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (prepn. and reaction of, with titanium bromide)
 IT **89316-02-9P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (prepn. and reaction of, with titanium bromide)
 RN 89316-02-9 HCAPLUS
 CN L-Mannopyranose, 6-deoxy-4-O-(2,4-di-O-acetyl-3,6-di-O-methyl-.beta.-D-
 glucopyranosyl)-2,3-di-O-methyl-, acetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L44 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1982:20397 HCAPLUS

DOCUMENT NUMBER: 96:20397

TITLE: Building units of oligosaccharides. XXXIII.

Synthesis of .beta.-glycosidically linked
disaccharides of L-rhamnose

AUTHOR(S): Paulsen, Hans; Kutschker, Wolfram; Lockhoff, Oswald

CORPORATE SOURCE: Inst. Org. Chem. Biochem., Univ. Hamburg, Hamburg,
D-2000/13, Fed. Rep. Ger.

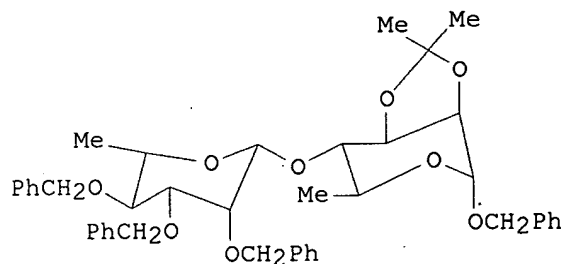
SOURCE: Chemische Berichte (1981), 114(10), 3233-41

CODEN: CHBEAM; ISSN: 0009-2940

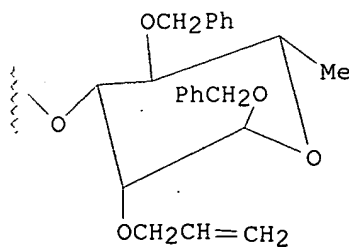
DOCUMENT TYPE: Journal

LANGUAGE: German

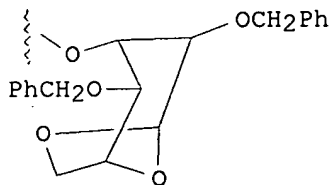
GI



I



II



III

AB 2,3,4-Tri-O-benzyl-.alpha.-L-rhamnopyranosyl bromide is a reactive halogenose which in the presence of a Ag silicate catalyst reacts with **saccharides** contg. a reactive hydroxyl group to give a .beta.-glycosidically linked disaccharide with good selectivity. The disaccharides of L-rhamnose I, II and III were prepd. in this way with either L-rhamnose or D-galactose as hydroxyl group component. Subsequent

deprotection gave the free disaccharides.

CC 33-4 (Carbohydrates)

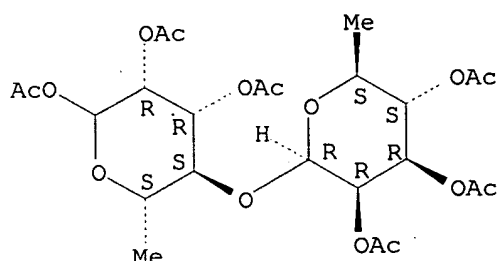
IT 71164-86-8P **75828-91-0P** 77777-85-6P 80153-00-0P
 80153-10-2P 80153-11-3P 80153-12-4P 80153-14-6P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

IT **75828-91-0P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

RN 75828-91-0 HCAPLUS

CN L-Mannopyranose, 6-deoxy-4-O-(2,3,4-tri-O-acetyl-6-deoxy-.beta.-L-mannopyranosyl)-, triacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L44 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1978:615680 HCAPLUS

DOCUMENT NUMBER: 89:215680

TITLE: Synthesis and NMR study of disaccharides and trisaccharides in the L-rhamnose series

AUTHOR(S): Laffite, Colette; Nguyen Phuoc Du, Anne Marie; Winternitz, Francois; Wylde, Renee; Pratviel-Sosa, Flore

CORPORATE SOURCE: CNRS, Fr.

SOURCE: Carbohydrate Research (1978), 67(1), 91-103

CODEN: CRBRAT; ISSN: 0008-6215

DOCUMENT TYPE: Journal

LANGUAGE: French

AB Various di- and tri-**saccharides** contg. L-rhamnose were synthesized by condensation of 2,3,4-tri-O-acetyl- or 2,3,4-tri-O-benzoyl-.alpha.-L-rhamnopyranosyl bromide with an unblocked glycopyranoside. The detn. of the anomeric configuration of L-rhamnose **saccharides** by NMR is difficult because structure has a greater effect on the spectra than does configuration. The .alpha. and .beta. configurations and the position of the substitution may be assigned from the chem. shifts of H-5 and CH3. In all the compds. having a .beta. configuration, a shielding of the Me group and a deshielding of the H-5 proton have been obsd. as compared to the compds. having an .alpha. configuration. The H-5 proton and the Me group of peracetylated, (1.fwdarw. 3)-linked .alpha.-L derivs. always resonate at higher fields than the corresponding protons of (1.fwdarw. 6)-linked .alpha.-L derivs.

CC 33-3 (Carbohydrates)

Section cross-reference(s): 22

IT 5239-09-8P **53130-95-3P** **53130-96-4P** 62075-51-8P
 68355-17-9P 68355-18-0P 68355-20-4P 68355-23-7P 68355-31-7P

68398-80-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

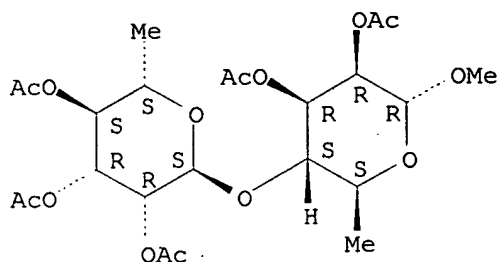
IT 53130-95-3P 53130-96-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 53130-95-3 HCAPLUS

CN .alpha.-L-Mannopyranoside, methyl 6-deoxy-4-O-(2,3,4-tri-O-acetyl-6-deoxy-
.alpha.-L-mannopyranosyl)-, diacetate (9CI) (CA INDEX NAME)

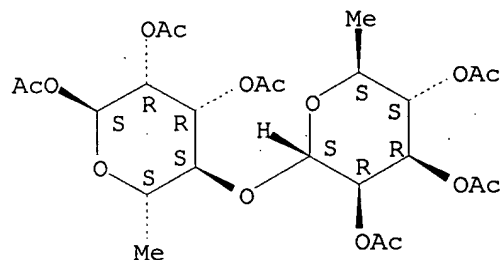
Absolute stereochemistry.



RN 53130-96-4 HCAPLUS

CN .alpha.-L-Mannopyranose, 6-deoxy-4-O-(2,3,4-tri-O-acetyl-6-deoxy-.alpha.-L-
mannopyranosyl)-, triacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L44 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1978:7244 HCAPLUS

DOCUMENT NUMBER: 88:7244

TITLE: P.M.R. studies on fully methylated disaccharides using
lanthanide shift reagents: assignments of the
methoxyl signals

AUTHOR(S): Streefkerk, Dirk G.; Stephen, Alistair M.

CORPORATE SOURCE: Dep. Org. Chem., Univ. Cape Town, Rondebosch, S. Afr.

SOURCE: Carbohydrate Research (1977), 57, 25-37

CODEN: CRBRAT; ISSN: 0008-6215

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The complexes of Eu(fod)₃ [Eu tris(1,1,1,2,2,3,3-heptafluoro-7,7-dimethyl-
4,6-octanedione)] with per-O-methylated aldohexosylaldohexoses, consisting
of D-glucopyranose and D-galactopyranose residues and having (1.fwdarw.2),
(1.fwdarw.4), and (1.fwdarw.6) linkages were studied by using proton NMR

spectroscopy. Eu(fod)₃ binds preferentially to two neighboring MeO-oxygens having an axial-equatorial relationship. Steric hindrance is a major factor in disfavoring certain sites. On the basis of Eu(fod)₃ effects on the MeO groups, and the comparison of the chem. shifts of corresponding groups in the permethylated mono- and disaccharides, the signals for most of the MeO groups of the latter compds. were assigned. The shift increments of the signals for these MeO groups, with respect to those for the corresponding groups in the permethylated monomers, were related to the type and the configuration of the intersugar linkage. The potential of the shift increments for assignment purposes in other permethylated di- or higher **saccharides** is discussed.

CC 33-3 (Carbohydrates)

Section cross-reference(s): 22

IT 605-81-2 1633-34-7 2296-47-1 3149-64-2 3149-65-3

19146-23-7 19146-24-8 37093-69-9 37093-70-2

37093-71-3 37093-72-4 37427-43-3 54548-42-4

RL: PRP (Properties)

(proton NMR spectrum of, effect of lanthanide shift reagent on)

IT 19146-23-7 19146-24-8 37093-70-2

37093-71-3 37427-43-3

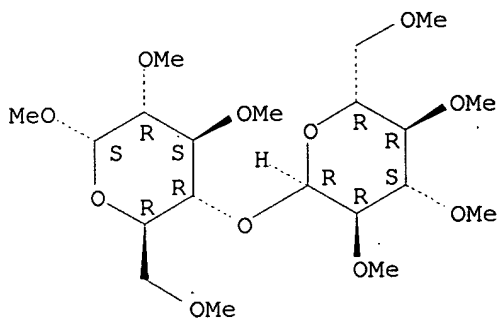
RL: PRP (Properties)

(proton NMR spectrum of, effect of lanthanide shift reagent on)

RN 19146-23-7 HCAPLUS

CN .alpha.-D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-.alpha.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

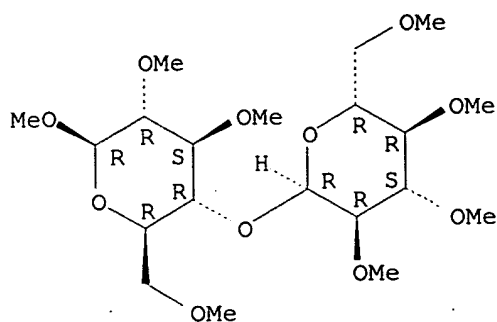
Absolute stereochemistry.



RN 19146-24-8 HCAPLUS

CN .beta.-D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-.alpha.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

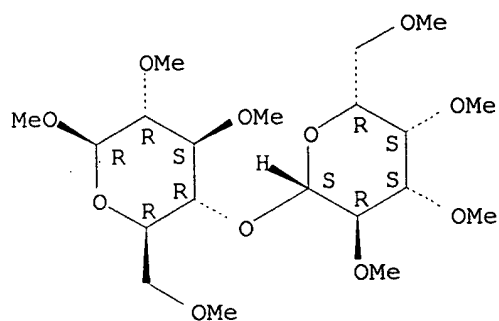
Absolute stereochemistry.



RN 37093-70-2 HCAPLUS

CN .beta.-D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-.beta.-D-galactopyranosyl)- (9CI) (CA INDEX NAME)

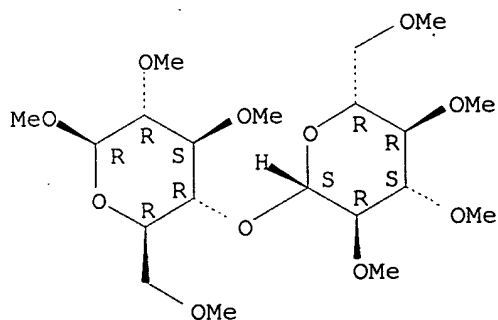
Absolute stereochemistry.



RN 37093-71-3 HCAPLUS

CN .beta.-D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-.beta.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

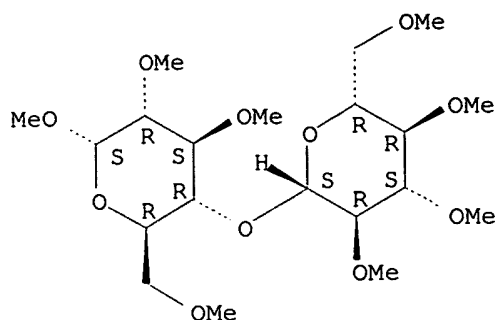
Absolute stereochemistry.



RN 37427-43-3 HCAPLUS

CN .alpha.-D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-.beta.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L44 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1975:4505 HCAPLUS

DOCUMENT NUMBER: 82:4505

TITLE: Carbon-13- and proton-nuclear magnetic resonance spectroscopy of permethylated disaccharides

AUTHOR(S): Haverkamp, Johan; De Bie, Marius J. A.; Vliegenthart, Johannes F. G.

CORPORATE SOURCE: Lab. Org. Chem., Univ. Utrecht, Utrecht, Neth.

SOURCE: Carbohydrate Research (1974), 37(1), 111-25

CODEN: CRBRAT; ISSN: 0008-6215

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The ¹³C-NMR spectra of permethylated disaccharides of D-glucose, or D-galactose, or both residues were analyzed and discussed. Peaks were assigned by correlation of the spectra of the disaccharide derivs. with those of the permethylated monomers. Large shift-increments for skeletal and methoxyl C atoms with respect to the resonance positions of corresponding atoms of the monomers, are explained in terms of steric or proximity effects. The configuration of glycosidic linkages can be deduced from the chem. shifts of the anomeric C atoms and from the ¹H-NMR data of the attached H atoms.

CC 33-3 (Carbohydrates)

Section cross-reference(s): 22

ST PMR permethyl disaccharide; **saccharide** permethyl PMR

IT **Saccharides**

RL: RCT (Reactant); RACT (Reactant or reagent)
(permethylated di-, PMR of)

IT 605-81-2 1633-34-7 2296-47-1 3149-64-2 3149-65-3
19146-23-7 19146-24-8 25018-29-5 37093-66-6
37093-69-9 37093-70-2 37093-71-3 37093-72-4
37093-73-5 37427-43-3 54503-58-1 54503-59-2 54548-40-2
54548-41-3 54548-42-4 54548-43-5 54548-44-6 54594-74-0

RL: RCT (Reactant); RACT (Reactant or reagent)
(PMR of)

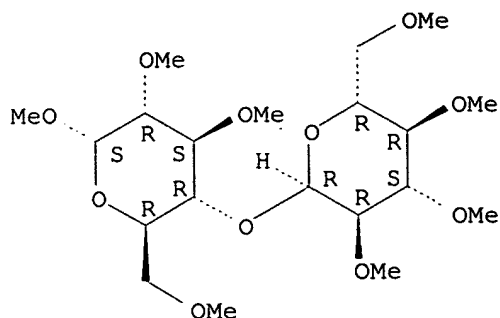
IT 19146-23-7 19146-24-8 37093-70-2
37093-71-3 37427-43-3 54548-44-6

RL: RCT (Reactant); RACT (Reactant or reagent)
(PMR of)

RN 19146-23-7 HCAPLUS

CN .alpha.-D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-.alpha.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

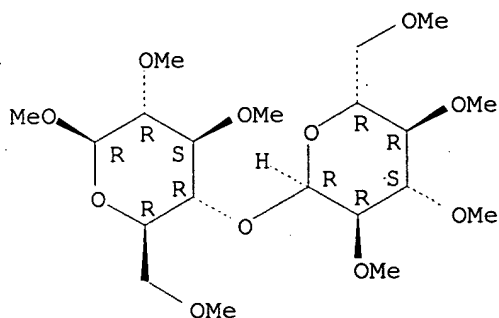
Absolute stereochemistry.



RN 19146-24-8 HCAPLUS

CN .beta.-D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-.alpha.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

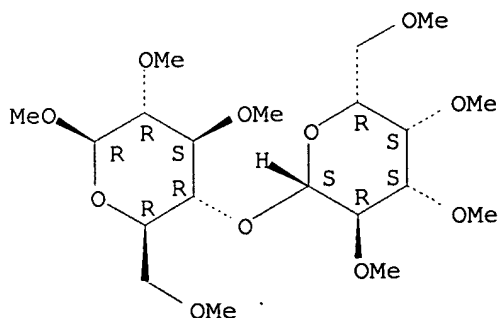
Absolute stereochemistry.



RN 37093-70-2 HCAPLUS

CN .beta.-D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-.beta.-D-galactopyranosyl)- (9CI) (CA INDEX NAME)

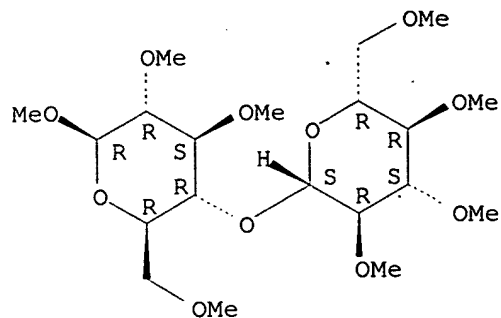
Absolute stereochemistry.



RN 37093-71-3 HCAPLUS

CN .beta.-D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-.beta.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

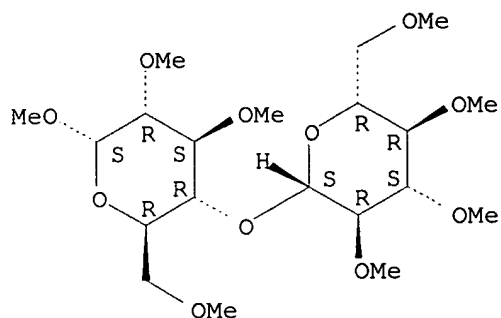
Absolute stereochemistry.



RN 37427-43-3 HCAPLUS

CN .alpha.-D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-.beta.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

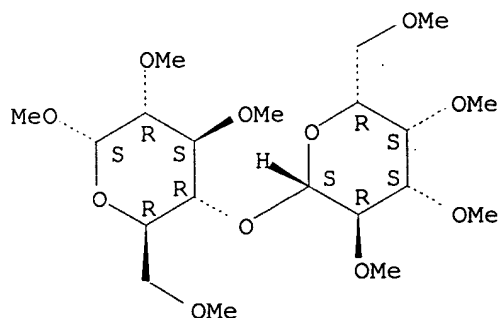
Absolute stereochemistry.



RN 54548-44-6 HCAPLUS

CN .alpha.-D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-.beta.-D-galactopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L44 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2003 ACS

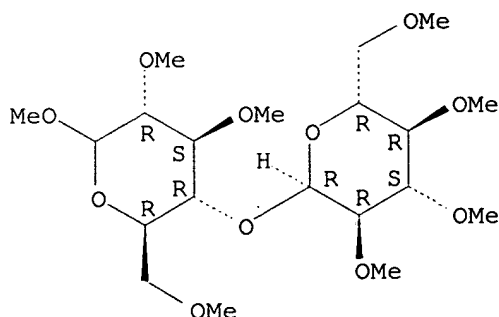
ACCESSION NUMBER: 1974:108773 HCAPLUS

DOCUMENT NUMBER: 80:108773

TITLE: PMR and carbon-13 NMR spectroscopy of methyl

2,3,4,6-tetra-O-methyl-.alpha.- and
-.beta.-D-glucopyranoside. Application to the
identification of partially methylated glucoses
Haverkamp, J.; Van Dongen, J. P. C. M.; Vliegthart,
J. F. G.
CORPORATE SOURCE: Lab. Org. Chem., Univ. Utrecht, Utrecht, Neth.
SOURCE: Tetrahedron (1974), 29(21), 3431-9
CODEN: TETRAB; ISSN: 0040-4020
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The ¹H and ¹³C magnetic resonance spectra of Me 2,3,4,6-tetra-O-methyl-
.alpha.- and -.beta.-D-glucopyranoside were completely assigned by
specific D and ¹³C labeling, spin decoupling and spectrum simulation. A
partially methylated glucose degradn. product in the permethylation anal.
of a carbohydrate could be identified after permethylation with labeled Me
groups and comparison of the PMR or ¹³C NMR spectra with those of ref.
permethylglucoses. These spectra indicated the type and ring form of the
monomers and the positions of the glycosidic bonds in the original oligo-
or polysaccharide.
CC 33-2 (Carbohydrates)
Section cross-reference(s): 22
IT **Saccharides**
RL: RCT (Reactant); RACT (Reactant or reagent)
(mono-, NMR identification of methylated)
IT 1633-35-8 **24807-91-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(methanolysis of, NMR identification of permethylated products from)
IT **24807-91-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(methanolysis of, NMR identification of permethylated products from)
RN 24807-91-8 HCAPLUS
CN D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-
.alpha.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L44 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1972:552477 HCAPLUS
DOCUMENT NUMBER: 77:152477
TITLE: Mass spectral studies of some fructose containing
oligosaccharide permethyl ethers
AUTHOR(S): Das, K. G.; Thayumanavan, B.
CORPORATE SOURCE: Natl. Chem. Lab., Poona, India

SOURCE: Organic Mass Spectrometry (1972), 6(10), 1063-9
CODEN: ORMSBG; ISSN: 0030-493X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Mass spectrometry was used to characterize fructofuranose units connected via C-2 to another sugar. The intensity of the m/e 101 and m/e 88 ions could not be used to differentiate between furanose and pyranose ring forms in disaccharide permethyl ethers. The type of glycosidic linkage influenced the formation of these ions.

CC 33-3 (Carbohydrates)

ST oligosaccharide ether mass spectrum; **saccharide** oligo mass spectrum; fructose oligosaccharide mass spectrum; mass spectrum oligosaccharide ether

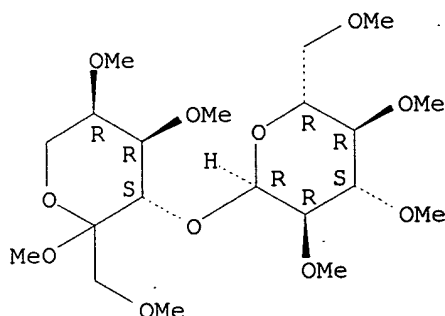
IT 5346-73-6 25018-29-5 25531-74-2 34141-00-9 38645-99-7
38646-01-4 38646-02-5 38646-05-8 38948-17-3
RL: PRP (Properties)
(mass spectrum of)

IT **38646-01-4**
RL: PRP (Properties)
(mass spectrum of)

RN 38646-01-4 HCAPLUS

CN D-Fructopyranoside, methyl 1,4,5-tri-O-methyl-2-O-(2,3,4,6-tetra-O-methyl-.alpha.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L44 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1972:475416 HCAPLUS

DOCUMENT NUMBER: 77:75416

TITLE: Proton magnetic resonance spectra of methyl ethers of disaccharides. Chemical shifts of anomeric protons

AUTHOR(S): Minnikin, D. E.

CORPORATE SOURCE: Sch. Chem., Univ. Newcastle-upon-Tyne, Newcastle-upon-Tyne, UK

SOURCE: Carbohydrate Research (1972), 23(1), 139-43
CODEN: CRBRAT; ISSN: 0008-6215

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Chem. shifts in CDCl₃ and C₆D₆ of the interglycosidic, and the Me D-glucosidic, anomeric protons of the permethylated disaccharides .alpha.- and .beta.-cellobiose, .alpha.- and .beta.-maltose, .beta.-laminarabiose, .beta.-melibiose, .beta.-gentiobiose, .beta.-lactose, .beta.-kojibiose, and .beta.-sophorose were tabulated. Changing solvents from CDCl₃ to C₆D₆

enabled the interglycosidic anomeric proton signals to be distinguished from those of the Me glycosidic group; the former are shifted downfield and the latter upfield. In general, the interglycosidic anomeric proton resonated at lower field than the Me glycosidic anomeric proton.

CC 33-8 (Carbohydrates)

Section cross-reference(s): 22

IT **Saccharides**

RL: RCT (Reactant); RACT (Reactant or reagent)
(di-, nuclear magnetic resonance of methyl ethers of)

IT 605-81-2 1633-34-7 3149-65-3 **19146-23-7** **19146-24-8**

37093-69-9 **37093-70-2** **37093-71-3** 37093-72-4

37093-73-5 **37427-43-3**

RL: RCT (Reactant); RACT (Reactant or reagent)
(N.M.R. of)

IT **19146-23-7** **19146-24-8** **37093-70-2**

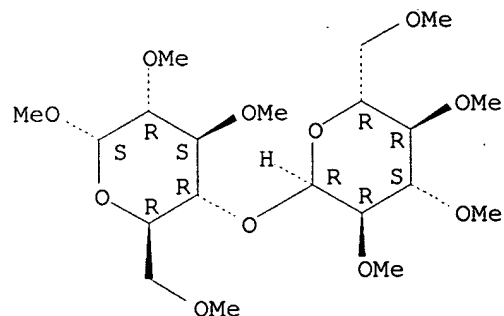
37093-71-3 **37427-43-3**

RL: RCT (Reactant); RACT (Reactant or reagent)
(N.M.R. of)

RN 19146-23-7 HCAPLUS

CN .alpha.-D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-.alpha.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

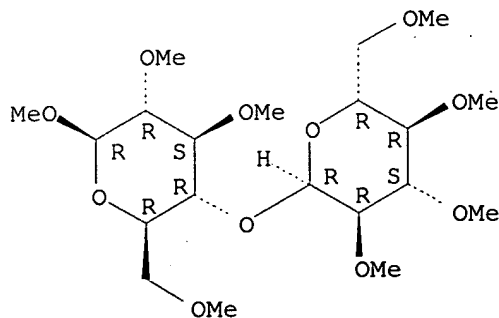
Absolute stereochemistry.



RN 19146-24-8 HCAPLUS

CN .beta.-D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-.alpha.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

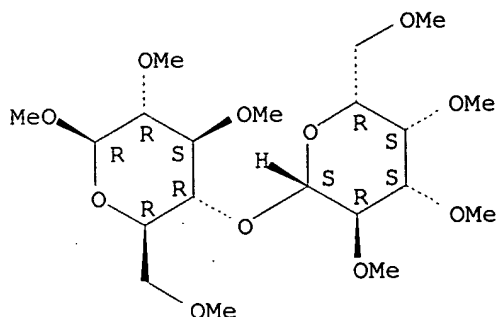
Absolute stereochemistry.



RN 37093-70-2 HCAPLUS

CN .beta.-D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-.beta.-D-galactopyranosyl)- (9CI) (CA INDEX NAME)

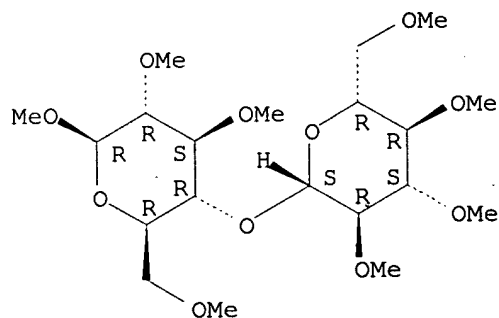
Absolute stereochemistry.



RN 37093-71-3 HCAPLUS

CN .beta.-D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-.beta.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

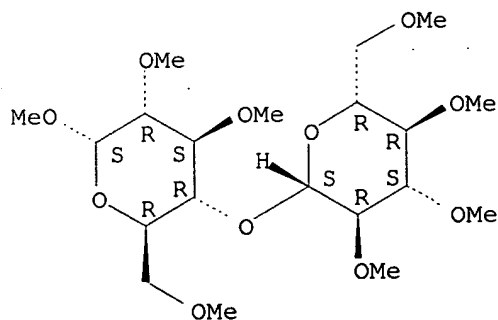
Absolute stereochemistry.



RN 37427-43-3 HCAPLUS

CN .alpha.-D-Glucopyranoside, methyl 2,3,6-tri-O-methyl-4-O-(2,3,4,6-tetra-O-methyl-.beta.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L44 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1969:106823 HCAPLUS

DOCUMENT NUMBER: 70:106823

TITLE: A New acetylbiase from steroidal glycosides of

"Pei-Wujiapi"

AUTHOR(S): Shoji, Junzo; Kawanishi, Sachiko; Sakuma, Seiichi;

Okino, Hiroko; Sano, Mitsuzi

CORPORATE SOURCE: Sch. Pharm. Sci., Showa Univ., Tokyo, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (1968), 16(11),

2308-10

CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Column chromatog. on silica gel gave 4-O-(2-O-acetyl-.beta.-D-digitalopyranosyl)-D-cymarose (I) together with methyl 4-O-(2-O-acetyl-.beta.-D-digitalopyranosyl)-.beta.-D-cymaroside (II) formed in the methanolysis of the glycoside. I (C17H30O9), m. 171.degree. (AcOEt), [.alpha.]2D3 -25.5.degree. (c 1.1, C5H5N formed an acetate, m. 116.degree., [.alpha.]2D3 -22.4.degree. (c 0.98, C5H5N). Deacetylation of I gave C15H28O8, m. 116.degree., [.alpha.]2D1 -6.7.degree. (c 0.75, C5H5N), which on Hakomori methylation gave C17H32O8, m. 106.degree., which on hydrolysis yielded cymarose and 2,4-di-O-methyl-D-digitalose. Methylation and methanolysis of I gave methyl 4-O-methyl-.alpha.-D-digitaloside indicating that position 2 in I was acetylated. In II (C16H28O9), m. 177.degree. (AcOEt-hexane), [.alpha.]2D1 -55.7.degree. (c 0.47, C5H5N), the position of the OAc group and the configuration of the glycosidic linkages were confirmed by N.M.R.

CC 33 (Carbohydrates)

IT **Saccharides**

RL: RCT (Reactant); RACT (Reactant or reagent)
(di-, of Asclepiadaceae)

IT **23819-24-1P 23819-26-3P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

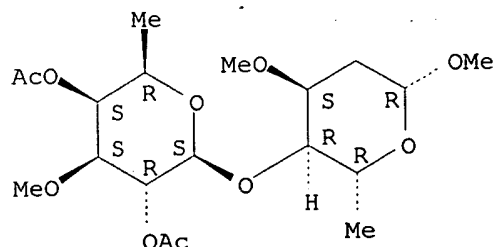
IT **23819-24-1P 23819-26-3P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 23819-24-1 HCAPLUS

CN .beta.-D-ribo-Hexopyranoside, methyl 2,6-dideoxy-4-O-(2,4-di-O-acetyl-6-deoxy-3-O-methyl-.beta.-D-galactopyranosyl)-3-O-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

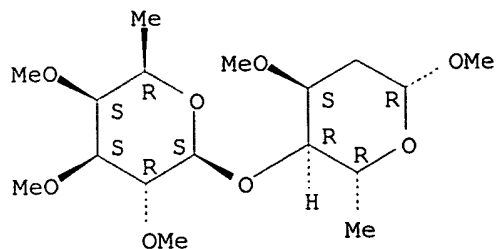


RN 23819-26-3 HCAPLUS

CN .beta.-D-ribo-Hexopyranose, methyl 2,6-dideoxy-4-O-(6-deoxy-2,3,4-tri-O-

methyl-.beta.-D-galactopyranosyl)-3-O-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



As is always the combination to pass emissions:

1. Change the oil and filter the morning of the test (BIG help)
2. Use fresh O2 sensor
3. Run an Emissions chip (I sell 'em for only \$15 shipped)
4. Fresh, factory recommended plugs
5. Ensure EGR operation is proper.
6. Cleaning the injectors with a pressurized solvent is also a very good idea.
7. Replace fuel filter if it is well-used.
8. Air Filter should be cleaned if using K&N style filter, otherwise replace paper filter.
9. Consider replacing PCV if it is well-used.

Doing the above will give you a greater than 95% chance of passing the emissions test assuming your engine mechanicals are in good order.

Good Luck

Scott Simpson

Extreme Automatics Test Pilot

TSM Pt. Series Director & Thrasher Chip Distributor

Scott231@gnttype.org/Scott231@Juno.com

Claim 2 (Formulat) zero hits

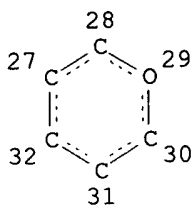
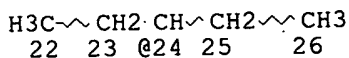
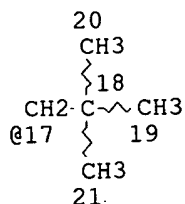
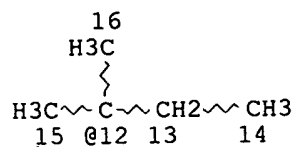
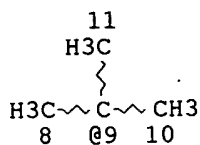
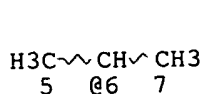
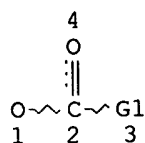
Krishnan 10/004,481

May 27, 2003

=> d que

L7

STR



VAR G1=6/9/12/17/24

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 27

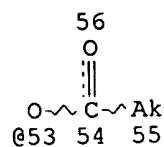
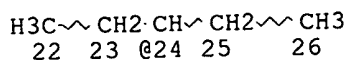
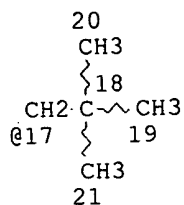
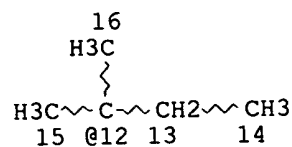
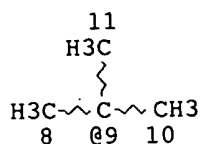
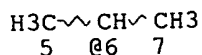
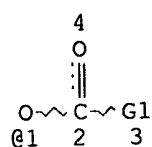
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STEREO ATTRIBUTES: NONE

L9 4982 SEA FILE=REGISTRY SSS FUL L7

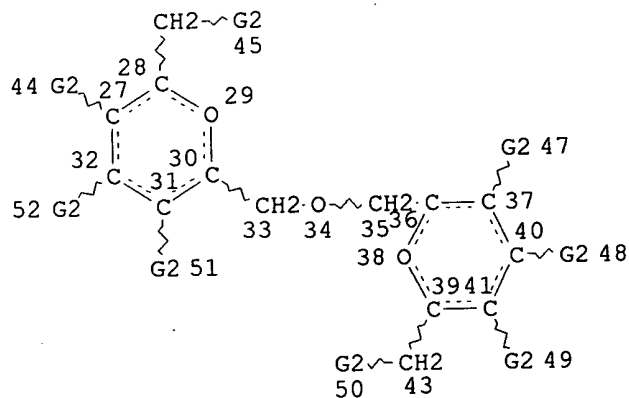
L10 1014 SEA FILE=REGISTRY ABB=ON PLU=ON L9 AND (2 OC5/ES OR OC4/ES)

L11 STR



42

Page 1-A



Page 2-A

VAR G1=6/9/12/17/24

VAR G2=1/53

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 55

DEFAULT MLEVEL IS ATOM

GGCAT IS LOC SAT AT 55

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 27 36

NUMBER OF NODES IS 55

Krishnan 10/004,481

May 27, 2003

STEREO ATTRIBUTES: NONE

L12 0 SEA FILE=REGISTRY SUB=L10 SSS FUL L11

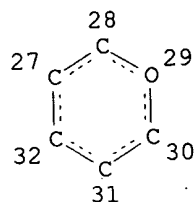
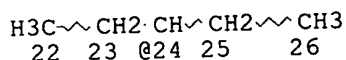
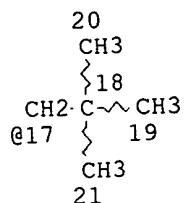
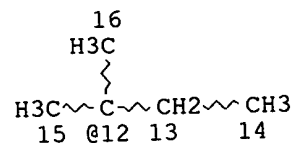
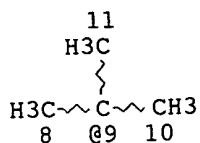
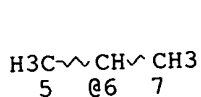
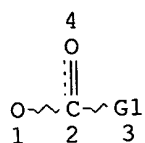
Claim 2 (Formula 2) zero hits

Krishnan 10/004,481

May 27, 2003

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L7

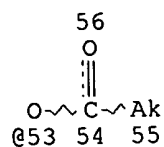
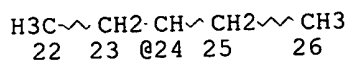
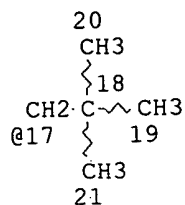
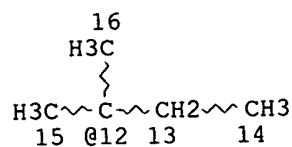
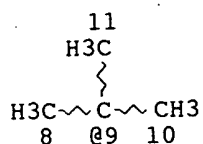
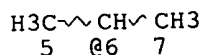
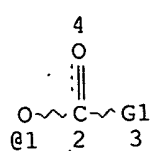
STR



VAR G1=6/9/12/17/24
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

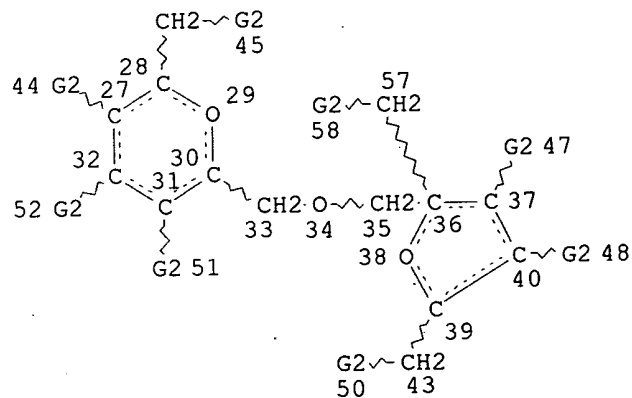
GRAPH ATTRIBUTES:
RSPEC 27
NUMBER OF NODES IS 32

STEREO ATTRIBUTES: NONE
L9 4982 SEA FILE=REGISTRY SSS FUL L7
L13 STR



42

Page 1-A



Page 2-A

VAR G1=6/9/12/17/24

VAR G2=1/53

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 55

DEFAULT MLEVEL IS ATOM

GGCAT IS LOC SAT AT 55

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 30

NUMBER OF NODES IS 55

STEREO ATTRIBUTES: NONE

L14 0 SEA FILE=REGISTRY SUB=L9 SSS FUL L13

Claim 2 (Formula 3+4)

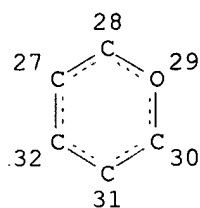
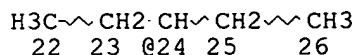
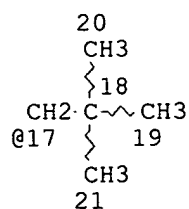
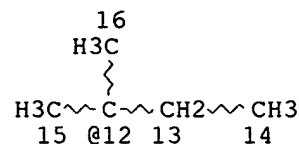
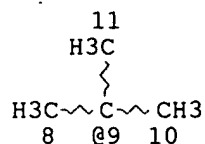
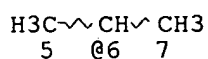
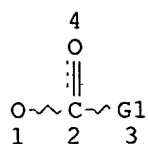
Krishnan 10/004,481

May 27, 2003

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L7

STR



VAR G1=6/9/12/17/24

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

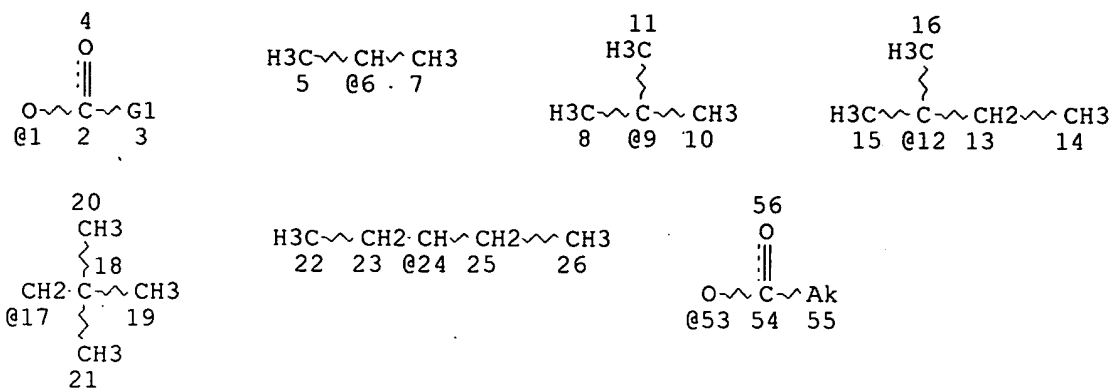
RSPEC 27

NUMBER OF NODES IS 32

STEREO ATTRIBUTES: NONE

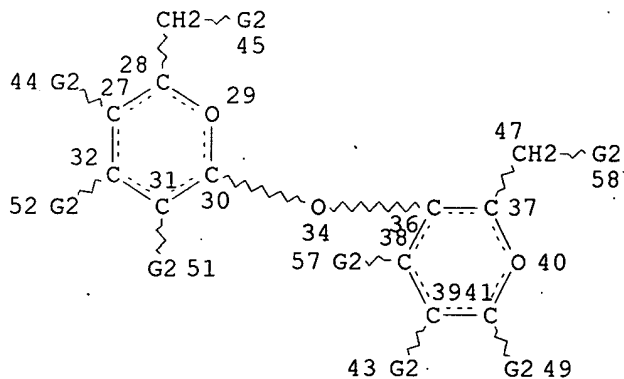
L9 4982 SEA FILE=REGISTRY SSS FUL L7

L15 STR



42

Page 1-A



Page 2-A

VAR G1=6/9/12/17/24

VAR G2=1/53

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 55

DEFAULT MLEVEL IS ATOM

GGCAT IS LOC SAT AT 55

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 39 30

NUMBER OF NODES IS 53

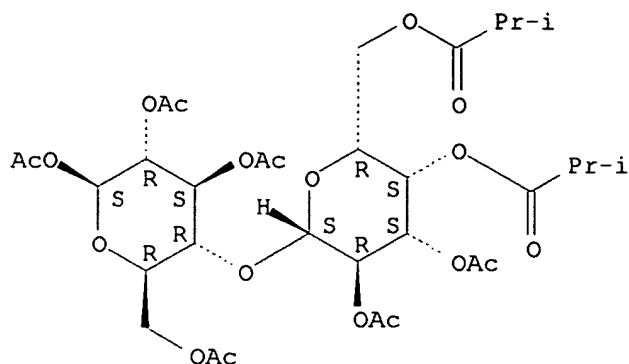
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L16          8 SEA FILE=REGISTRY SUB=L9 SSS FUL L15
L17          7 SEA FILE=HCAPLUS ABB=ON PLU=ON L16

```

PATENT INFORMATION:

Absolute stereochemistry.



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:498595 HCAPLUS

DOCUMENT NUMBER: 133:267012

TITLE: A practical process for polymer-supported synthesis

AUTHOR(S): Quiclet-Sire, B.; Wilczewska, A.; Zard, S. Z.

CORPORATE SOURCE: CNRS, Institut de Chimie des Substances Naturelles, Gif-Sur-Yvette, 91198, Fr.

SOURCE: Tetrahedron Letters (2000), 41(30), 5673-5677

CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 133:267012

AB Various complex structures can be attached to a polystyrene oligomer using the simple but powerful xanthate transfer technol.; the material obtained is sol. in many of the common org. solvents allowing further reactions under homogeneous conditions, but can be pptd. with methanol making this technique esp. suitable for conducting parallel syntheses.

IT 298228-39-4DP, homologs

RL: SPN (Synthetic preparation); PREP (Preparation)

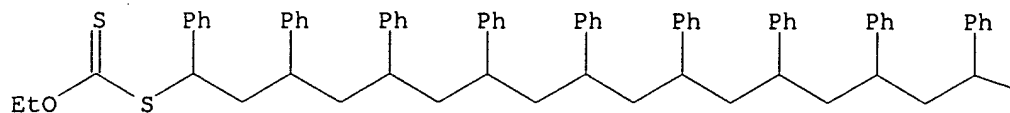
(practical process for polymer-supported synthesis of steroids, carbohydrates, nucleotides and oligosaccharides)

RN 298228-39-4 HCAPLUS

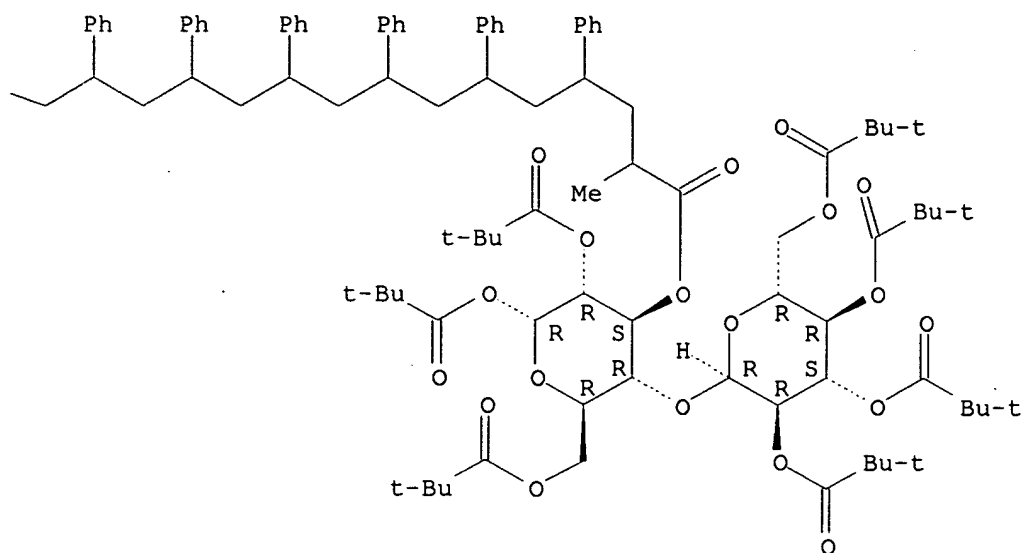
CN .alpha.-D-Glucopyranose, 4-O-[2,3,4,6-tetrakis-O-(2,2-dimethyl-1-oxopropyl)-.alpha.-D-glucopyranosyl]-, 1,2,6-tris(2,2-dimethylpropanoate) 3-[32-[(ethoxythioxomethyl)thio]-2-methyl-4,6,8,10,12,14,16,18,20,22,24,26,28,30,32-pentadecaphenyldotriacontanoate] (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1999:468460 HCAPLUS
 DOCUMENT NUMBER: 131:92545
 TITLE: Carbohydrates, useful in solid delivery systems
 INVENTOR(S): Blair, Julian Alexander
 PATENT ASSIGNEE(S): Quadrant Holdings Cambridge Limited, UK
 SOURCE: PCT Int. Appl., 44 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9933853	A2	19990708	WO 1998-GB3888	19981223
WO 9933853	A3	19990930		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6352722	B1	20020305	US 1998-218845	19981222
ZA 9811843	A	19990624	ZA 1998-11843	19981223
CA 2316275	AA	19990708	CA 1998-2316275	19981223

AU 9920629	A1	19990719	AU 1999-20629	19981223
EP 1042339	A2	20001011	EP 1998-965297	19981223
EP 1042339	B1	20030326		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001527087	T2	20011225	JP 2000-526529	19981223
AT 235503	E	20030415	AT 1998-965297	19981223
US 2002058067	A1	20020516	US 2001-4481	20011101
PRIORITY APPLN. INFO.:			US 1997-68754P	P 19971223
			US 1998-218845	A1 19981222
			WO 1998-GB3888	W 19981223

OTHER SOURCE(S): MARPAT 131:92545

AB Derivatized carbohydrates are provided which can be used to form a variety of materials including solid delivery systems. The derivatized carbohydrates are generally carbohydrates, wherein at least a portion of the hydroxyl groups on the carbohydrate are substituted with a branched hydrophobic chain, such as a hydrocarbon chain, via, for example, an ether or ester linkage. The solid delivery systems can be used for delivery and release of a variety of substances, and are, e.g., in the form of tablets or powders for oral administration, microspheres or implants for i.v., intradermal, transdermal, pulmonary or other routes of administration. The derivatized carbohydrates may be processed to form a solid matrix having a substance, such as a therapeutic agent, incorporated therein. The solid matrix is provided in a solid dose form which is capable of releasing a therapeutic substance in situ at various controlled rates. Thus, a model drug diltiazem-HCl was incorporated into solid vehicles of the straight-chain trehalose octacetate or the branched-chain trehalose octa-3,3-dimethylbutyrate and trehalose octapivalate as well as composite formulations of the 2 carbohydrates. The drug release was much slower from the branched-chain carbohydrate formulation than from the straight-chain formulation.

IT 118649-02-8 229962-37-2

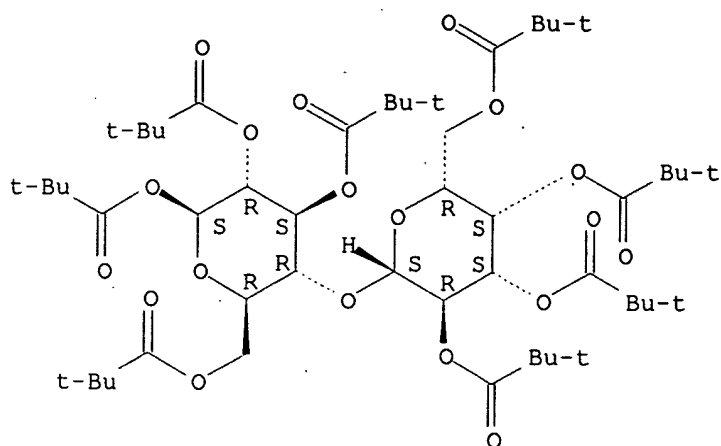
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(carbohydrates in solid delivery systems)

RN 118649-02-8 HCAPLUS

CN .beta.-D-Glucopyranose, 4-O-[2,3,4,6-tetrakis-O-(2,2-dimethyl-1-oxopropyl)-.beta.-D-galactopyranosyl]-, tetrakis(2,2-dimethylpropanoate) (9CI) (CA INDEX NAME)

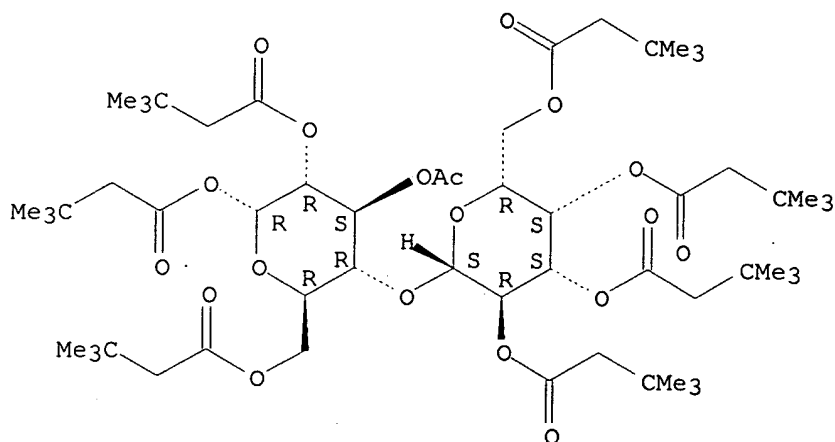
Absolute stereochemistry.



RN 229962-37-2 HCAPLUS

CN .alpha.-D-Glucopyranose, 4-O-[2,3,4,6-tetrakis-O-(3,3-dimethyl-1-oxobutyl)-
 .beta.-D-galactopyranosyl]-, 3-acetate 1,2,6-tris(3,3-dimethylbutanoate)
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L17 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:12575 HCAPLUS

DOCUMENT NUMBER: 130:139531

TITLE: Use of N-pivaloylimidazole as protective reagent for
 sugars

AUTHOR(S): Santoyo-Gonzales, Francisco; Uriel, Clara; Calvo-Asin,
 Jose A.

CORPORATE SOURCE: Inst. Biotechnology, Fac. Ciencias, Univ. Granada,
 Granada, E-18071, Spain

SOURCE: Synthesis (1998), (12), 1787-1792

CODEN: SYNTBF; ISSN: 0039-7881

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB N-pivaloylimidazole was prepd. and used as a selective protective reagent for D-glucose, D-mannose, D-galactose, 2-acetamido-2-deoxy-D-glucose, 2-acetamido-2-deoxy-.beta.-D-glucopyranosyl azide, and lactose. A variety of pivalates were obtained with moderate to good regioselectivity.

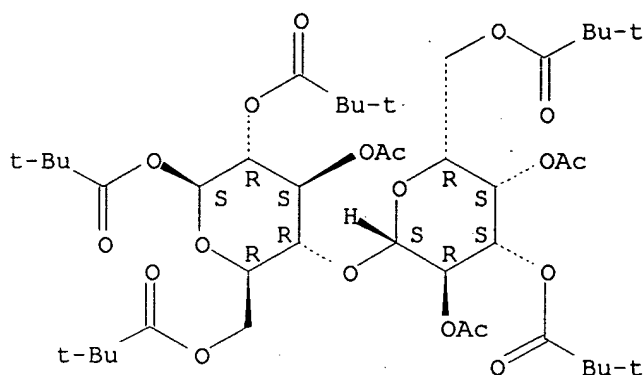
IT 220017-59-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(pivaloylimidazole as regioselective protective reagent for sugars)

RN 220017-59-4 HCAPLUS

CN .beta.-D-Glucopyranose, 4-O-[2,4-di-O-acetyl-3,6-bis-O-(2,2-dimethyl-1-oxopropyl)-.beta.-D-galactopyranosyl]-, 3-acetate 1,2,6-tris(2,2-dimethylpropanoate) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1994:218305 HCAPLUS

DOCUMENT NUMBER: 120:218305

TITLE: Synthesis and utilization of saccharide intermediates

AUTHOR(S): Becker, D.; Galili, N.

CORPORATE SOURCE: Dep. Chem., Technion-Israel Inst. Technol., Haifa, 32000, Israel

SOURCE: Carbohydrate Research (1993), 248, 129-41

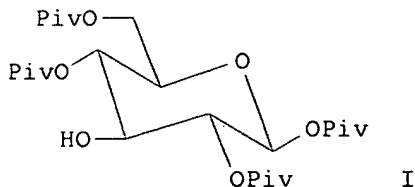
CODEN: CRBRAT; ISSN: 0008-6215

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 120:218305

GI

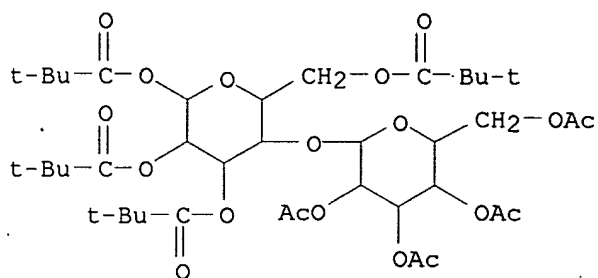


AB A new method has been developed for prepn. of partially pivaloylated saccharides, e.g. I, in one step from readily available starting materials. These intermediates were used in the synthesis of disaccharides and a glucosteroid.

IT 144102-42-1P 153527-53-8P 153527-55-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

RN 144102-42-1 HCAPLUS

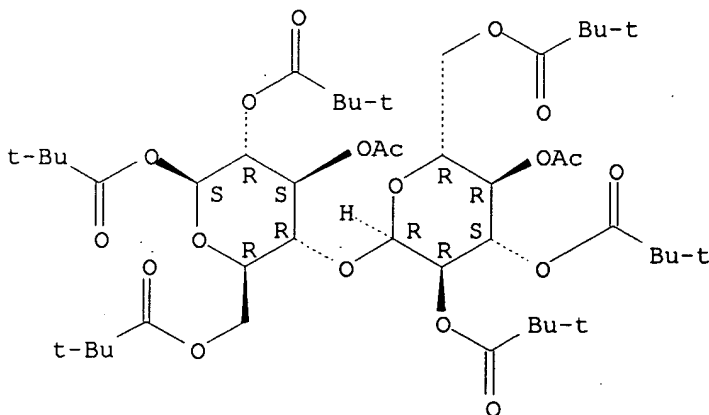
CN .beta.-D-Glucopyranose, 4-O-(2,3,4,6-tetra-O-acetyl-.beta.-D-glucopyranosyl)-, tetrakis(2,2-dimethylpropanoate) (9CI) (CA INDEX NAME)



RN 153527-53-8 HCAPLUS

CN .beta.-D-Glucopyranose, 4-O-[4-O-acetyl-2,3,6-tris-O-(2,2-dimethyl-1-oxopropyl)-.alpha.-D-glucopyranosyl]-, 3-acetate 1,2,6-tris(2,2-dimethylpropanoate) (9CI) (CA INDEX NAME)

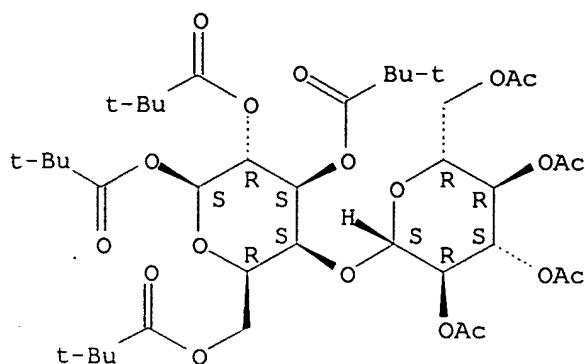
Absolute stereochemistry.



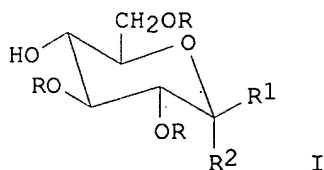
RN 153527-55-0 HCAPLUS

CN .beta.-D-Galactopyranose, 4-O-(2,3,4,6-tetra-O-acetyl-.beta.-D-glucopyranosyl)-, tetrakis(2,2-dimethylpropanoate) (9CI) (CA INDEX NAME)

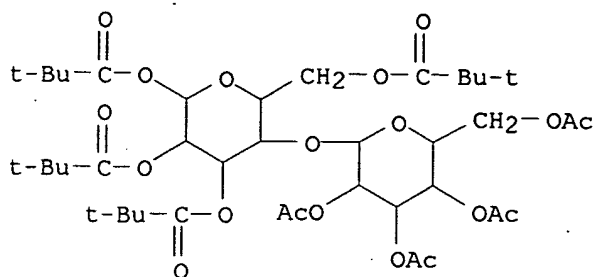
Absolute stereochemistry.



L17 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1992:612821 HCAPLUS
 DOCUMENT NUMBER: 117:212821
 TITLE: A novel synthesis of protected glucose intermediates
 AUTHOR(S): Becker, D.; Galili, N.
 CORPORATE SOURCE: Dep. Chem., Technion-Israel Inst. Technol., Haifa, 32000, Israel
 SOURCE: Tetrahedron Letters (1992), 33(33), 4775-8
 CODEN: TELEAY; ISSN: 0040-4039
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 117:212821
 GI



AB Tetra-O-pivaloyl-.beta.-D-glucopyranoses, e.g. I (R = pivaloyl, R1 = OR, R2 = H) (II), have been prepd. in one step from anhyd. glucose and pivaloyl chloride. These new intermediates can be converted into the corresponding esters, or used in the synthesis of a disaccharide in good yield. Thus, I (R1R2 = H, OH) can be prepd. from II, and use for prepn. of .beta.-gluco derivs. via the corresponding trichloroacetimidate I [R1 = H, R2 = C(NH)CCl3].
 IT **144102-42-1P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 RN 144102-42-1 HCAPLUS
 CN .beta.-D-Glucopyranose, 4-O-(2,3,4,6-tetra-O-acetyl-.beta.-D-glucopyranosyl)-, tetrakis(2,2-dimethylpropanoate) (9CI) (CA INDEX NAME)



L17 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1989:75911 HCAPLUS

DOCUMENT NUMBER: 110:75911

TITLE: Glycosylimidates. Part 33. Azidosphingosine glycosylation in glycosphingolipid synthesis

AUTHOR(S): Zimmermann, Peter; Bommer, Rene; Bare, Thomas; Schmidt, Richard R.

CORPORATE SOURCE: Fak. Chem., Univ. Konstanz, Konstanz, D-7750, Fed. Rep. Ger.

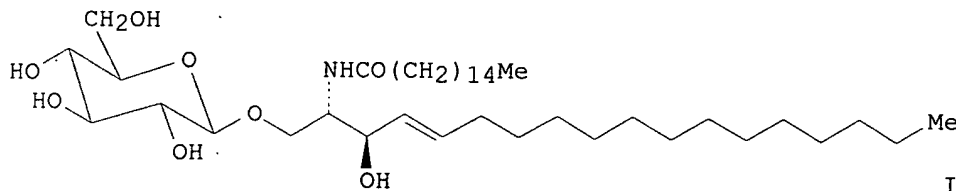
SOURCE: Journal of Carbohydrate Chemistry (1988), 7(2), 435-52
CODEN: JCACDM; ISSN: 0732-8303

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 110:75911

GI



AB The 3-O-protected azide derivs. of C18-sphingosine reacted with O-acyl protected trichloroacetimidates of D-glucose, D-galactose, and lactose to afford the corresponding .beta.-glycosides in high yields. Ortho-ester formation in the case of O-acetyl compd. could be avoided by increasing the amt. of BF3.Et2O catalyst. Deprotection and azido group redn. provided the psychosines of D-glucose, D-galactose, and lactose, which are versatile intermediates for the attachment of different fatty acid residues. With hexadecanoyl chloride, for instance, the corresponding glycosphingolipids, e.g., I, were obtained.

IT 118649-02-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and removal of 1-pivaloyl group from)

RN 118649-02-8 HCAPLUS

CN .beta.-D-Glucopyranose, 4-O-[2,3,4,6-tetrakis-O-(2,2-dimethyl-1-oxopropyl)-
.beta.-D-galactopyranosyl]-, tetrakis(2,2-dimethylpropanoate) (9CI) (CA
INDEX NAME)

May 27, 2003

Absolute stereochemistry.

